

CLAIMS

What is claimed is:

1. A method of adjusting the shutter speed of a digital camera, comprising:
 - 2 measuring the motion blur in an image;
 - maximizing the shutter speed when the motion blur exceeds a
 - 4 predetermined amount.
2. The method of claim 1, further comprising:
 - 2 capturing at least two frames;
 - comparing at least two frames to determine the amount of motion blur
 - 4 in the image.
3. The method of claim 1 where the shutter speed is not increased when an aperture
 - 2 is already open at its maximum size.
4. The method of claim 2 where the two frames are compared using the absolute
 - 2 value of the difference between the corresponding pixels from the two frames.
5. The method of claim 2 where the two frames are compared using a general two-
 - 2 dimensional Taylor series expansion.
6. The method of claim 2 where two frames are compared using template matching.

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7. The method of claim 2 where the two frames are captured immediately before the
2 final image is captured.

8. A digital camera, comprising:
2 a photo sensor;
a lens that forms an image on the photo sensor;
4 a shutter with an adjustable speed that controls the length of time the
photo sensor sees the image;
6 a processor configured to measure the amount of motion blur in the
image, the processor configured to maximize the speed of the shutter when the
8 motion blur exceeds a predetermined amount.

9. The device of claim 7, further comprising:
2 a processor configured to capture at least two frames from the photo
sensor and compare at least two frames to determine the amount of motion
4 blur between the two frames.

10. The device of claim 7, further comprising:
2 a processor configured not to increase the shutter speed when an
aperture is already at its maximum opening.

11. A digital camera, comprising:
2 a photo sensor;
a lens that forms an image on the photo sensor;

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- 4 a shutter with an adjustable speed that controls the length of time the
photo sensor sees the image;
- 6 a means for detecting blur in a scene;
a means for adjusting the shutter speed in response to the blur detected.

12. A method of adjusting the shutter speed of a digital camera, comprising:

- 2 measuring the motion blur in an image;
setting the shutter speed as a function of the amount of motion blur.

13. The method of claim 1, further comprising:

- 2 capturing at least two frames;
comparing at least two frames to determine the amount of motion blur
4 in the image.

14. The method of claim 12 where the shutter speed is not increased when an aperture
2 is already open at its maximum size.

15. The method of claim 13 where the two frames are compared using the absolute
2 value of the difference between the corresponding pixels from the two frames.

16. The method of claim 13 where the two frames are compared using a general two-
2 dimensional Taylor series expansion.

17. The method of claim 13 where two frames are compared using template matching.

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18. The method of claim 13 where the two frames are captured immediately before
2 the final image is captured.

19. A digital camera, comprising:
2 a photo sensor;
a lens that forms an image on the photo sensor;
4 a shutter with an adjustable speed that controls the length of time the
photo sensor sees the image;
6 a processor configured to measure the amount of motion blur in the
image, the processor configured to set the speed of the shutter as a function of
8 the amount of motion blur.

20. The device of claim 7, further comprising:
2 a processor configured to capture at least two frames from the photo
sensor and compare at least two frames to determine the amount of motion
4 blur between the two frames.